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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,181	11/20/2003	Evran Y. Ener	S51.12-0049	9322

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EXAMINER	
SPISICH, GEORGE D	
ART UNIT	**PAPER NUMBER**
3616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/718,181	ENER ET AL.	
	Examiner	Art Unit	
	George D. Spisich	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37.CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Upon further consideration and review of the application, claims, figures and Prior Art, the condition of the disclosure and scope and allowability of the claims in previous Office Actions has been reconsidered and determined to be unclear and able to be properly rejected under 112 and with new art rejections. For this reason, this Office Action is Non-Final. Examiner apologizes for the changes in position, however, the terms and disclosure of Applicant's invention have caused misinterpretation of Applicant's invention.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, (1) the pivoting connection between the "axle" and the pivot mount, and (2) a steering element that allows for the wheels of the auxiliary axle to be "steerable" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended.". If a drawing figure is to be canceled, the appropriate

figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

The specification is objected to due to the use of the terms "axle" and "steerable" wheels throughout the specification. The term "steerable" is not proper since there is no element or direct control of the wheels to steer them. Furthermore, it is not clear if the term "axle" is a proper use of the term. It appears to the Examiner that the axle 28 is nothing more that a mount of the pivoting wheel carrier. In these arrangements, the wheel includes a stub or spindle axle and it is improper to use the term "axle" to refer to the mount.

Applicant may not use terms that contradict their use and definition in the art.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

With respect to the term "steerable" in claims 1 and 2, it is not disclosed how these wheel are steered. To refer to the steering/turning of the vehicle that causes the wheels to pivot, is not an accurate controlled movement to be described by the term "steerable". It appears to the Examiner that the wheels can only be considered to be "pivatable" since there is no direct steering control of the wheels.

With respect to the phrase "axles pivotally connected to a respective one of the pair of wheels", it is not clear how this movement is accomplished based on the disclosure and the Figures. On page 5, lines 10-19 (esp. lines 13-14), it is disclosed that "a steering arm 39 is connected to each steering pivot mount 29 of the wheels". It is not clear to the Examiner how the steering arm 39 acts on pivot mount 29 such that there is movement between element 29 and "axle" 28 since there is no pivoting joint shown or disclosed. If Applicant intends that the pivot mount 29 does not pivot but is fixed to the axle and the wheel pivots with respect

to the pivot mount, Examiner is unsure how a steering arm 39 connected to a fixed pivot mount 29 would be able to steer the wheel since the arm 39 is only disclosed as connected to a fixed pivot mount 29.

Furthermore, as stated previously, the wheel mounting arrangement of this sort is typically via a stub/spindle axle within (at least partially) the wheel. A typical pivoting/steering, stub/spindle axle, would then have a pivoting connection between the axle and the mount/vehicle frame, not the axle and the wheel. The use of the term "axle" as best as can be understood by the examiner is merely a "mount" for the wheel/axle arrangement shown. Therefore, the term "axle" is inaccurate based on the use of the term in the art. For Examining purposes in this Office Action, Examiner has only given weight to the term "axle" as a mount for a pivoting axle/wheel carrier.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5,7-9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art in Figure 1 in view of Christenson et al. (USPN 4,705,133) previously cited by Examiner.

Applicant's Prior Art in Figure 1 shows a concrete pumping truck having frame rails, a hopper carried at the rear end of the truck and an outrigger system. However, Figure 1 does not show an auxiliary axle system pivotally mounted at the rear of the truck. It is well known in the art to mount an auxiliary axle system at the rear of a work vehicle that typically hauls heavy loads. These axle systems are pivoted with respect to the frame to contact the ground when needed and raised when not needed. These auxiliary axles help to distribute the weight of the vehicle and it's load and improve the security of the vehicle by increasing the contact between the wheels and the ground for added traction and stability.

Christenson et al. shows an auxiliary axle system having a U-shaped frame (with an additional cross beam 28') having a base or cross member (28) and a pair of spaced arms (32,32', best seen in Figure 2) connected at one end to the cross member, the pair of spaced arms having a free end connected to a pair of spaced "axles" (which are the wheel mounts that are similar structurally to Applicant's), the pair of spaced "axles" being pivotally connected to a respective one of the "steerable"/pivotable wheels. Christenson et al. shows first and second connector arms (24,24') connected to the cross member and extending in a direction opposite the direction of the pair of spaced arms, the first and second connector arms pivotally mounted to a respective truck frame rail on the vehicle and means which is at least one hydraulic cylinder (30) connected to a support surface of the vehicle (31) and the U-shaped frame for moving the auxiliary axle system between a first position in contact with a ground surface and a second

position elevated above the ground surface. The hydraulic cylinder is connected to "at least" one of the support arms via the cross member.

Christenson et al. shows each of the pair of "steerable"/pivotable wheels comprises a steering arm connected to the wheel, the steering arm of each wheel connected be a tie rod (34). The mounting of the auxiliary axle system would read on the relationship of the axle to the hopper.

Christenson et al. discloses a mounting bracket (23,23') connected to each of the truck frame rails at the rear end of the concrete pumping truck, each mounting bracket connected to a housing containing a bearing, wherein the first connector arm and the second connector arm are pivotally connect to a respective bearing housing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the auxiliary axle system as taught by Smith et al. on the rear of the Prior Art Figure 1 as it is well known in the art to add an auxiliary axle to help distribute the load and increase traction and stability.

Claims 1-5,7-9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art in Figure 1 in view of Christenson et al. (USPN 4,762,421).

Applicant's Prior Art in Figure 1 shows a concrete pumping truck having frame rails, a hopper carried at the rear end of the truck and an outrigger system. However, Figure 1 does not show an auxiliary axle system pivotally mounted at the rear of the truck. It is well known in the art to mount an auxiliary axle system

at the rear of a work vehicle that typically hauls heavy loads. These axle systems are pivoted with respect to the frame to contact the ground when needed and raised when not needed. These auxiliary axles help to distribute the weight of the vehicle and it's load and improve the security of the vehicle by increasing the contact between the wheels and the ground for added traction and stability.

Christenson et al. shows an auxiliary axle system having a U-shaped frame having a base or cross member (24) and a pair of spaced arms (12,12' and portion of 11,11'), best seen in Figure 5) connected at one end to the cross member, the pair of spaced arms having a free end connected to a pair of spaced "axles" (which are the mounting for the pivoting wheel arrangement), the pair of spaced axles being pivotally connected to a respective one of the "steerable" wheels. The inclusion of an additional raised cross beam (28) does not prevent the frame structure of Christenson et al. from being considered a "U-shaped frame". Christenson et al. shows first and second connector arms (end portions of 11,11') connected to the cross member and extending in a direction opposite the direction of the pair of spaced arms, the first and second connector arms pivotally mounted to a respective truck frame rail on the vehicle and means which is at least one hydraulic cylinder (21) connected to a support surface of the vehicle (7) and the U-shaped frame for moving the auxiliary axle system between a first position in contact with a ground surface and a second position elevated above the ground surface. The hydraulic cylinder is connected to "at least" one of the support arms via the cross member.

Christenson et al. shows each of the pair of "steerable" wheels comprises a steering arm (15) connected to the wheel, the steering arm of each wheel connected be a tie rod (29). The mounting of the auxiliary axle system would read on the relationship of the axle to the hopper.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the auxiliary axle system as taught by Smith et al. on the rear of the Prior Art Figure 1 as it is well known in the art to add an auxiliary axle to help distribute the load and increase traction and stability.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,705,133) as applied to claims 1-5,7-9 and 11-14 above, and further in view of Cherney et al. (USPN 5,897,123) provided in Applicant's IDS.

It may be argued that Prior Art Figure 1 in view of Christenson et al. does not show a mounting bracket connected to the truck frame rails and the mounting bracket connected to a housing containing a bearing and the at least one hydraulic cylinder connected between an outrigger support and the U-shaped frame.

Cherney et al. shows an auxiliary axle system pivotally mounted on the rear of a concrete truck. There is shown a mounting bracket (540,510,512) connected to each of the truck frame rails at the rear end of the truck, each mounting bracket connected to a housing (560) containing a bearing (570)

wherein the first connector arm and the second connector arm are pivotally connected to a respective housing bearing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auxiliary axle system as would be present in the Prior Art Figure 1 in view of Christenson et al. by providing a mounting bracket on the end of the vehicle rails and having a housing and a bearing as shown by Cherney et al. so as to provide a stable mounting structure for the auxiliary axle system.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,762,421) as applied to claims 1-5,7-9 and 11-14 above, and further in view of Cherney et al. (USPN 5,897,123) provided in Applicant's IDS.

It may be argued that Prior Art Figure 1 in view of Christenson et al. does not show a mounting bracket connected to the truck frame rails and the mounting bracket connected to a housing containing a bearing and the at least one hydraulic cylinder connected between an outrigger support and the U-shaped frame.

Cherney et al. shows an auxiliary axle system pivotally mounted on the rear of a concrete truck. There is shown a mounting bracket (540,510,512) connected to each of the truck frame rails at the rear end of the truck, each mounting bracket connected to a housing (560) containing a bearing (570)

wherein the first connector arm and the second connector arm are pivotally connected to a respective housing bearing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auxiliary axle system as would be present in the Prior Art Figure 1 in view of Christenson et al. by providing a mounting bracket on the end of the vehicle rails and having a housing and a bearing as shown by Cherney et al. so as to provide a stable mounting structure for the auxiliary axle system.

Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,762,421) as applied to claims 1-5,7-9 and 11-14 above, and further in view of French (USPN 2,650,106).

Applicant's Figure 1 in view of Christenson et al. does not show a tie rod having a bend such that the central portion is in a different plane that the end portions and the particular relationship with the hopper. Smith et al. only shows a straight tie rod.

French shows an axle system having pivoted wheel carriers connected to each other with a tie rod (17) having a central portion (18) that is offset from the end portion so as to be in a different plane. This arrangement allows for the adjustment of the tie rod and allows for different spatial relationships between the parts and systems of the vehicle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the tie rod of Prior Art Figure 1 in view of Christenson et al. (shown in Christenson et al.) by provided a tie rod having an offset central portion as taught by French so as to provide adjustment and particular spatial relationships with respect to other parts of the concrete pumping vehicle. The tie rod of French would meet the limitations of the tie rod spatial relationship with respect to the hopper of the Prior Art Figure 1.

Claims 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,762,421) as applied to claims 1-5,7-9 and 11-14 above, and further in view of Smith et al. (USPN 6,189,901).

Applicant's Prior Art Figure 1 in view of Christenson et al. has been discussed in the prior rejection, however does not show mounting flanges on the end of the support arms and one end of a pair of hydraulic cylinders connected to the support arms.

Smith et al. discloses an auxiliary axle having support arms (30) having pair of mounting flanges and the first end of a pair of hydraulic cylinders is connected between the pair of mounting flanges on the support arms. Inherently, having a pair of space hydraulic cylinders would provide a more stable operation for the auxiliary axle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auxiliary axle system of Prior Art Figure 1 in

view of Christenson et al. by providing mounting flanges on the support arms and mounting a pair of hydraulic cylinders to the mounting flanges of the support arms and between the frame so as to provide direct control and improved stabilization of the support arms as taught by Smith et al.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,762,421) as applied to claims 1-5,7-9 and 11-14 above, and further in view of Konop (USPN 6,247,713).

Applicant's Prior Art Figure 1 in view of Christenson et al. has been discussed in a prior rejection, however, neither show a support plate connected to the cross member and the pair of support arms.

Konop et al. shows an auxiliary axle system (as best seen in Figure 2) having a support plate (the curved portion in the junction of parts 120 and 162). This support plate would increase the strength of the axle system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the axle system of Figure 1 in view of Christenson et al. by provided a support plate as taught by Konop et al. to strengthen the U-frame and axle system.

Examiner's Comments

Examiner points out that the addition of an auxiliary axle system on a heavy work vehicle (or any vehicle) is an obvious modification and well known in

the art. The particular structure and spatial relationships claimed are shown by the Prior Art references and the spatial relationships are met when the Prior Art Figure 1 is outfitted with an auxiliary axle system. Furthermore, the arrangement and/or claimed structure of Applicant's invention is shown in the references cited and applied. The use of the terms "axle" and "steerable" have been given the same structural weight as the operation and function of the disclosed element in Applicant's invention. Applicant has claimed an auxiliary axle having a U-shape frame and spaced apart "axle" mounts, with the wheel carrier connected with a tie rod. Examiner insists that the references properly show Applicant's claimed invention and are properly combined.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ferris et al. (USPN 4,079,798), Mohrbacker et al. (USPN 4,084,833), Silbernagel (USPN 4,314,709).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (571) 272-6676. The examiner can normally be reached on Monday-Friday 9:00 to 6:30 except alt. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George D. Spisich
February 19, 2007

2/20/07

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